NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL UNIT

PROJECT NO. 6.529005T

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SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION	GRADATION	POOL PROPRIES.	
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED OR WEATHERED EARTH MATERIALS WHICH	WELL GRADED- INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE	ROCK DESCRIPTION HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WHEN TESTED, WOULD YIELD SPT REFUSAL, AN INFERRED	TERMS AND DEFINITIONS
CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND WHICH YIELDS LESS THAN 100 BLOWS PER 30 cm ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586), SOIL CLASSIFICATION IS	<u>UNIFORM</u> - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE (ALSO POORLY GRADED). <u>GAP-GRADED</u> - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.	ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 2.5 cm PER 50 BLOWS.	ALLUVIUM (ALLUV.) - SOILS WHICH HAVE BEEN TRANSPORTED BY WATER.
BASED ON THE AASHTO SYSTEM AND BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL	ANGULARITY OF GRAINS	IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.	AQUIFER - A WATER BEARING FORMATION OR STRATA.
COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE: YERY STIFF, CRAY SILTY CLAY, MOIST WITH INTERBEDDED FIRE SAND LAYERS, HIGHLY PLASTIC, 4-7-6	THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS ARE DESIGNATED BY THE TERMS; ANGULAR, SUBANGULAR,	ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLOWS: WEATHERED NON-COASTAL PLAIN MATERIAL THAT YIELDS SOT MANALUS ASSESSMENT OF THE PROPERTY OF TH	ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.
SOIL LEGEND AND AASHTO CLASSIFICATION	SUBROUNDED, OR ROUNDED. MINERALOGICAL COMPOSITION	ROCK (WR) NON-COASTAL PLAIN MATERIAL THAT YIELDS SPT N VALUES > 100 BLOWS PER 30 cm.	ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS,
GENERAL GRANULAR MATERIALS SILT-CLAY MATERIALS ORGANIC MATERIALS	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER	CRYSTALLINE ROCK (CR) FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRAINTE,	OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC.
CLASS. (:35% PASSING #200) (:85% PASSING #200) ORGANIC MATERIALS GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5	THEY ARE CONSIDERED OF SIGNIFICANCE. COMPRESSIBILITY	ONEISS, GABBRO, SCHIST, ETC. NON-CRYSTALLINE FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.
CLASS. A-1-8 A-1-6 A-2-4 A-2-5 A-2-8 A-2-7 A-7-5 A-3 A-6, A-7	SLIGHTLY COMPRESSIBLE LIQUID LIMIT LESS THAN 30	ROCK (NCR) SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.	CALCAREOUS (CALC.) - SOILS WHICH CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
SYMBOL DOCUMENT OF THE PROPERTY OF THE PROPERT	MODERATELY COMPRESSIBLE LIQUID LIMIT 31-50 HIGHLY COMPRESSIBLE LIQUID LIMIT GREATER THAN 50	COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SEDIMENTARY SPT REFUSAL ROCK TYPE INCLUDES LIMESTONE SANDSTONE CEMENTED	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE
% PASSING # 10 50 MX GRANULAR SILT-	PERCENTAGE OF MATERIAL GRANULA MATERIAL GRANULAR SILT-CLAY	ROCK (CP) SHELL BEDS, ETC. WEATHERING	OR AT BOTTOM OF SLOPE.
#40 30 MX 50 MX 51 MN CLAY PEAT SOILS SOILS SOILS SOILS SOILS	TRACE OF COCAMICA MATERIAL SOILS SOILS OTHER MATERIAL	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER	CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
LIQUID LIMIT	TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE 1 - 10% LITTLE ORGANIC MATTER 3 - 5% 5 - 12% LITTLE 10 - 20%	HAMMER IF CRYSTALLINE.	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.
PASTICINDEX 6 MX N.P. 10 MX 10 MX 11 MN 11 MN 10 MX 10 MX 11 MN 11 MN LITTLE OR HIGHLY	MODERATELY ORGANIC 5 - 10% 12 - 20% SOME 20 - 35% HIGHLY ORGANIC >10% >20% HIGHLY 35% AND ABOVE	VERY SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, (V. SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF	DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.
GROUP INDEX 0 0 0 4 MX 8 MX 12 MX 16 MX No MX MODERATE ORGANIC USUAL TYPES STONE FRAGS. ORGANIC SOILS	GROUND WATER	OF A CRYSTALLINE NATURE. SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP,
OF MAJOR GRAVEL AND SAND GRAVEL AND SAND SOULS SOULS MATTER	WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING.	(SLI.) 2.5 cm. OPEN JOINTS MAY CONTAIN CLAY, IN GRANITIOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.	MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES
GEN. RATING	STATIC WATER LEVEL AFTER 24 HOURS.	MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN	RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.
AS A EXCELLENT TO GOOD FAIR TO POOR POOR UNSUITABLE	<u>VPW</u> PERCHED WATER, SATURATED ZONE OR WATER BEARING STRATA	(MOD.) GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
P.I. OF A-7-5 ≤L.L30 : P.I. OF A-7-6 >L.L30	O-1∭ → SPRING OR SEEPAGE	WITH FRESH ROCK.	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.
CONSISTENCY OR DENSENESS	MISCELLANEOUS SYMBOLS	MODERATELY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL SEVERE AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH	FLOOD PLAIN (F.P.) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM,
PRIMARY SOIL TYPE COMPACTNESS OR CONSISTENCY PENETRATION RESISTENCE COMPRESSIVE STRENGTH	ROADWAY EMBANKMENT OPT DATE TEST BORING SAMPLE VST PMT TEST BORING DESCRIPTION	(MOD. SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.
(N-VALUE) (KN/m²)	DESIGNATIONS	SEVERE ALL ROCKS EXCEPT QUARTZ DISCOLORED OR STAINED, ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED	JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
GRANULAR LOOSE 4 TO 10	AUGER BORING S - BULK SAMPLE	(SEV.) IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN.	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS
(NON-COHESIVE) DENSE 30 TO 50	ARTIFICIAL FILL OTHER THAN SS - SPLIT SPOON ROADWAY EMBANKMENTS - CORE BORING SAMPLE	IF TESTED. YIELDS SPT N VALUES > 100 BLOWS PER 30 cm.	LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
VERY DENSE >50 VERY SOFT	ST - SHELBY TUBE INFERRED SOIL BOUNDARIES & SAMPLE	VERY SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT (V. SEV.) THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING.	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS, MOTTLING IN SOILS LISUALLY
GENERALLY SOFT 2 TO 4 25 TO 50	MONITORING WELL #ITE-77: INFERRED ROCK I INF RS - ROCK SAMPLE	SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. <i>IP TESTED. YIELDS SPT N VALUES < 100 BLOWS PER 30 cm.</i>	INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
MATERIAL STIFF 8 TO 15 100 TO 200	PIEZOMETER TTTTT ALLUVIAL SOIL BOUNDARY PIEZOMETER INSTALLATION RT - RECOMPACTED	COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
(COHESIVE) VERY STIFF 15 TO 30 200 TO 400 HARD >30 >400	SLOPE INDICATOR TRIAXIAL SAMPLE	SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.	RESIDUAL SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
TEXTURE OR GRAIN SIZE	ROCK STRUCTURES	ROCK HARDNESS	ROCK QUALITY DESIGNATION (R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	O SOUNDING ROD	VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGISTS PICK.	ROCK SEGMENTS EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
OPENING (MM) 4.76 2.0 0.42 0.25 0.075 0.053	ABBREVIATIONS	HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED	SAPROLITE (SAP.) - RESIDUAL SOIL WHICH RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY (BLDR.) (COB.) (GR.) SAND SAND (SL.) (CL.)	AR - AUGER REFUSAL PMT - PRESSUREMETER TEST	TO DETACH HAND SPECIMEN.	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, WHICH HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR
(GE.) (GR.) (CSE. SD.) (F. SD.) (SL.) (CL.)	BT - BORING TERMINATED SD SAND, SANDY CL CLAY SL SILT, SILTY	MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 6 mm DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGISTS PICK. HAND SPECIMENS CAN BE DETACHED	SCHISTOSITY OF THE INTRUDED ROCKS.
GRAIN MM 305 75 2.0 0.25 0.05 0.005 SIZE IN. 12" 3"	CPT - CONE PENETRATION TÉST SLI SLIGHTLY CSE COARSE TCR - TRICONE REFUSAL	BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 1 mm DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.
SOIL MOISTURE - CORRELATION OF TERMS	DMT - DILATOMETER TEST	HARD CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 25 mm MAXIMUM SIZE BY HARD BLOWS OF THE	STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N) OF A 63.5 kg HAMMER FALLING 0.76 METERS REQUIRED TO PRODUCE A PENETRATION OF 30 cm INTO SOIL WITH
SOIL MOISTURE SCALE FIELD MOISTURE GUIDE FOR FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION	e - VOID RATIO F FINE W - MOISTURE CONTENT	POINT OF A GEOLOGISTS PICK. SOFT CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS	A 5 cm OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS LESS THAN 2.5 cm PENETRATION WITH 50 BLOWS.
- SATURATED - USUALLY LIQUID; VERY WET, USUALLY	FOSS FOSSILIFEROUS V VERY	FROM CHIPS TO SEVERAL CENTIMETERS IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY
(SAT.) FROM BELOW THE GROUND WATER TABLE	FRAGS FRAGMENTS C.I CAVE IN	VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 25 mm	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.
PLASTIC STATIONARY DEGLINES PROVIDED TO	MED MEDIUM FIAD - FILLED IMMEDIATELY AFTER DRILLING LS LIMESTONE	SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.	STRATA ROCK QUALITY DESIGNATION (S.R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 10 CENTIMETERS
RANGE CPI) PLASTIC LIMIT SEMISOLID; REQUIRES DISTING TO ATTAIN OPTIMUM MOISTURE	EQUIPMENT USED ON SUBJECT PROJECT	FRACTURE SPACING BEDDING	DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (T.S.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.
ON OPTIMUM MOISTLIRE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE	DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE:	TERM SPACING TERM THICKNESS VERY WIDE MORE THAN 3 m VERY THICKLY BEDDED > 1 m	10-501L (1.5.) - SURPACE SOILS USUALLY CONTAINING ORGANIC MATTER.
OM OPTIMUM MOISTURE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE SL SHRINKAGE LIMIT	X DIEDRICH D-50 CLAY BITS AUTOMATIC X MANUAL	WIDE 1 TO 3 m THICKLY BEDDED 0.5 - 1 m	BENCH MARK: NCDOT REF. SURVEY PTS. 30007, 30008, 30004 ELEVS. 119.259m, 120.464m
- DRY - (D) REQUIRES ADDITIONAL WATER TO	6" CONTINUOUS FLIGHT AUGER CODE SIZE:	CLOSE 5 TO 30 cm VERY THINLY BEDDED 10 - 50 mm	AND 115.856m MSL RESPECTIVELY
ATTAIN OPTIMUM MOISTURE	X CME-550 X 8° HOLLOW AUGERS	VERY CLOSE LESS THAN 5 cm THICKLY LAMINATED 2.5 - 10 mm THINLY LAMINATED < 2.5 mm	
PLASTICITY	CME-45 ON MARSH HARD FACED FINGER BITS N.	INDURATION	NOTES: Geotechnical Exploration
PLASTICITY INDEX (PI) DRY STRENGTH NONPLASTIC 0-5 VERY LOW	BUGGY TUNGCARBIDE INSERTS X + Q	FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.	Performed By:
LOW PLASTICITY 6-15 SLIGHT	X CASING W/ADVANCER HAND TOOLS:	FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.	MACTEC
MED. PLASTICITY 16-25 MEDIUM HIGH PLASTICITY 26 OR MORE HIGH	PORTABLE HOIST X TRICONE 7-10cm STEEL TEETH POST HOLE DIGGER	MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE;	
COLOR	OTHER CME-55 TRICONE TUNGCARB. HAND AUGER	BREAKS EASILY WHEN HIT WITH HAMMER.	MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC. 3301 ATLANTIC AVENUE
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YEL-BRN, BLUE-GRAY)	OTHER CME-SS TRAILOR X CORE BIT SOUNDING ROD	INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.	RALEIGH, NORTH CAROLINA 27604
MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.	OTHER SIDE-DISCHARGE VANE SHEAR TEST WING BIT OTHER	EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE;	(919) 876–0416
	WING DIL	SAMPLE BREAKS ACROSS GRAINS.	·